REMARKS

Reconsideration and allowance of this application are respectfully requested. Claims 3, 4, 7, 10 and 12 have been amended. New claims 14-17 have been added. Claims 1-17 are now pending in the application. The rejections are respectfully submitted to be obviated in view of the amendments and remarks presented herein.

Claim Objections

Claims 4 and 10 have been objected to because of alleged informalities. Applicant has editorially amended claims 4 and 10 in order to more clearly recite exemplary embodiments of the invention. Therefore, withdrawal of the objection to the claims is respectfully requested.

Rejection Under 35 U.S.C. § 101

Claims 4-13 have been rejected under 35 U.S.C. § 101 because the claimed invention is allegedly directed to non-statutory subject matter. Applicant has amended claims 4, 7, 10 and 12 in order to more clearly recite exemplary embodiments of the invention. Support for the claim amendments is found in the specification in at least paragraphs [84]-[86] and [90]-[92]. Therefore, reconsideration and withdrawal of the rejection under 35 U.S.C. § 101 are respectfully requested.

Rejection of Claims 1-13 (Kwong et al.)

Claims 1-13 are rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Kwong et al. (U.S. Patent Number 6,289,506; hereinafter "Kwong"). The rejection is respectfully traversed.

Regarding independent claim 1, the claimed invention relates to a Java execution device comprising an extended class library and a Java Virtual Machine (JVM). The extended class library includes a class file of a machine code obtained by precompiling a class file included in a standard class library, and the JVM executes the class file of the machine code class file or an application file included in the extended class library.

The Examiner has alleged on page 7 of the Office Action that Kwong discloses the claimed invention, and relies on column 4, lines 27-38 of Kwong for the teaching that "a machine instruction of the machine code includes an operant in which symbolic reference information is inserted."

However, Kwong fails to teach or suggest, *inter alia*, an extended class library which includes "a class file of a machine code obtained by precompiling a class file included in a standard class library," as recited by claim 1. In this exemplary embodiment of the present invention, codes in class library among Java codes are precompiled. On the contrary, Kwong's Java source program is analyzed, and as a result of analysis, codes having effect on performance are precompiled.

The claimed invention recites that precompiling of codes in class library is performed before program execution, and precompiled code may be stored in the Java Virtual Machine. However, in Kwong, a test step is provided each time Java program is executed, and codes having effect on performance is founded in the test step and compiled per each program, and the program is executed using the compiled codes.

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At least by virtue of the aforementioned differences, the invention defined by claim 1 is distinguished over Kwong. Claims 2 and 3 are dependent claims including all of the elements of independent claim 1, which as established above, is distinguished over Kwong. Therefore, claims 2 and 3 are allowable over Kwong for at least the aforementioned reasons as well as for their additionally recited features.

Regarding amended independent claim 4, the claimed invention relates to a Java class file comprising a constant, a field and a method. A symbolic reference information indicates a specific class, field or method of an object, and method information of the method comprises an attribute of a code formed of the machine instruction having an operand in which symbolic reference information is inserted in place of an address.

The claimed invention as recited by amended claim 4 is distinguished over Kwong for analogous reasons as discussed above. Furthermore, the Examiner has alleged on page 8 of the Office Action that Kwong discloses the claimed invention, and relies further on column 7, line 62 to column 8, line 18, column 10, lines 14-30 of Kwong for the teaching of the claimed invention.

However, Applicant maintains that Kwong fails to teach or suggest, *inter alia*, that "a symbolic reference information indicates a specific class, field or method of an object, and method information of the method comprises an attribute of a code formed of the machine instruction having an operand in which the symbolic reference information is inserted in place of an address," as recited by amended claim 4 (emphasis added).

Kwong's disclosure of translation of bytecode into native compiled code fails to teach or suggest every element of the claimed invention. Particularly, there is no teaching or suggestion in Kwong of an operand in which symbolic reference information is inserted in place of an address.

At least by virtue of the aforementioned differences, the invention defined by claim 4 is distinguished over Kwong. Claims 5 and 6 are dependent claims including all of the elements of independent claim 4, which as established above, is distinguished over Kwong. Therefore, claims 5 and 6 are allowable over Kwong for at least the aforementioned reasons as well as for their additionally recited features.

Regarding amended independent claim 7, the claimed invention relates to a method of executing a Java application on a Java platform in a device, the method comprising precompiling a class file, executing a machine instruction, and executing a Java application file by using at least one of the Just-In-Time (JIT) compiling method and an interpreting method.

The claimed invention as recited by amended claim 7 is distinguished over Kwong for analogous reasons as discussed above. Furthermore, the Examiner has alleged on page 9 of the Office Action that Kwong discloses the claimed invention, and relies on column 4, lines 27-38 of Kwong for the teaching of the claimed invention.

However, Applicant maintains that Kwong's translation of bytecode into native compiled code as disclosed and discussed above, fails to teach or suggest every element of the claimed invention. Thus, the claimed invention as recited by amended claim 7 is distinguished over Kwong. Claims 8 and 9 are dependent claims including all of the elements of independent claim

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7, which as established above, is distinguished over Kwong. Therefore, claims 8 and 9 are allowable over Kwong for at least the aforementioned reasons as well as for their additionally recited features.

Regarding amended independent claim 10, the claimed invention relates to a method of precompiling a Java file which is executed on a Java platform in a device, the Java application causing the device to perform a desired function. A Java class file or a Java source file is converted into a machine instruction including an operand in which symbolic reference information is inserted in place of an address.

The claimed invention as recited by amended claim 10 is distinguished over Kwong for analogous reasons as discussed above. Claim 11 is a dependent claim including all of the elements of independent claim 10, which as established above, is distinguished over Kwong. Therefore, claim 11 is allowable over Kwong for at least the aforementioned reasons as well as for its additionally recited features.

Regarding amended independent claim 12, the claimed invention relates to an execution method in a Java Virtual Machine (JVM) in which a Java application is executed on a Java platform in a device, the Java application causing the device to perform a desired function. The Execution method comprises determining whether method information of a method to be executed includes an attribute of a code formed of a machine instruction having an operand in which symbolic reference information is inserted in place of an address, and if the method information of the method to be executed includes the attribute of the code formed of the

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machine instruction, linking the symbolic reference information with an address and executing

the machine instruction.

The claimed invention as recited by amended claim 12 is distinguished over Kwong for

analogous reasons as discussed above. Claim 13 is a dependent claim including all of the

elements of independent claim 11, which as established above, is distinguished over Kwong.

Therefore, claim 13 is allowable over Kwong for at least the aforementioned reasons as well as

for its additionally recited features.

Reconsideration and withdrawal of the rejection under 35 U.S.C. § 102(b) are thus

respectfully requested.

Newly Added Claims

Claims 14-17 have been added to provide more varied protection for the present

invention. Claims 14-17 are allowable based on at least their dependencies, as well as for their

additionally recited features. Support for the newly added claims is found in the specification in

at least paragraph [59].

With further regards to claims 15 and 16, Kwong does not teach or suggest the

specifically claimed machine instruction of machine code including an operand in which

symbolic reference information is inserted in place of an address. Kwong only mentions

generally that a compiler translates Java bytecodes into native machine object code for selected

program methods, and the native complied program methods will have their attributes in the

class file changed (column 4, lines 26-31). However, Kwong's general mention of compiling

selected program methods and resulting changed attributes does not teach or suggest the

explicitly claimed *operand* in which symbolic reference information is inserted in place of an

address.

In view of the above, reconsideration and allowance of this application are now believed

to be in order, and such actions are hereby solicited. If any points remain in issue which the

Examiner feels may be best resolved through a personal or telephone interview, the Examiner is

kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue

Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any

overpayments to said Deposit Account.

Respectfully submitted,

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